

TO: Eric Sandin, GEF II, Geo/8

Groundwater Use Registry Buckslip

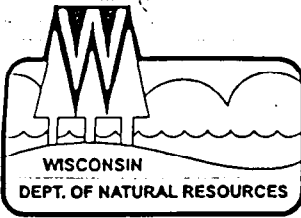
Site Name LONG BRANCH BAR
Address State Hwy 111 & US Hwy 8
CATAWBA, WI 54515
BRRTS # 03-51-000236
GPS Location: _____ latitude _____ longitude _____
Date of Closure Decision 9/02/99

Required

- ☒ Closure Letter
- ☒ Deeds for all properties with ES exceedance in Groundwater (Recorded GWR)
- ☐ GPS location (latitude and longitude)
- ☒ Location map
- ☒ Detailed Site Map
- ☒ Groundwater Flow Direction Diagram including location of monitoring wells and all drinking water wells
- ☒ Latest Groundwater Plume Map with Groundwater Flow Direction
- ☒ Latest Table of Analytical Results for Groundwater

If Available, include the following:

- ☐ Metes and Bounds Legal Description
- ☒ Tax Parcel Number ON DEED # 3501033276
- ☒ Geologic cross sections showing soil and groundwater contaminant source extent and location, isoconcentrations for all groundwater contaminants that exceed NR 140 enforcement standards, water table and piezometric elevations, and the extent, location and elevation of geologic units, bedrock, and confining unites



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Northern Region Headquarters
107 Sutliff Ave.
Rhinelander, Wisconsin 54501-0818
Telephone 715-365-8900
FAX 715-365-8932
TDD 715-365-8957

May 13, 1999

Mr. Loren DeGarmo
1060 Saunders Ave
Park Falls, WI 54552

Subject: Long Branch Tavern, Rt 1, Catawba, WI BRRTS # 03-51-000236

Dear Mr. DeGarmo:

The Department of Natural Resources provided a notice to you that the degree and extent of gasoline contamination at the above-named site was required to be investigated and remediated. We have since been informed that the required investigation and remediation has been accomplished.

On May 6, 1999, the above-named site was reviewed by the Northern Region Closeout Committee for a determination as to whether or not the case qualified for close out under ch. NR 726, Wis. Adm. Code.

Based on the investigative and remedial documentation provided to the Department, it appears that the gasoline contamination at the above-named site has been remediated in compliance with the requirements of chs. NR 700 to 724, Wis. Adm. Code., and that no further action is necessary at this time. Therefore, the Department will consider the case "closed," if the responsible party sign and record a Groundwater Use Restriction for the property.

Enclosed is an example of a Groundwater Use Restriction. If you wish to close your site with a Groundwater Use Restriction, please draft a specific Groundwater Use Restriction for this site and submit the draft to me. Department of Natural Resources attorneys will review the draft and return it to you with revisions. After you have made the revisions, you should sign and record the restriction with the County Register of Deeds. To document that this condition has been complied with, the responsible party must submit to the Department a copy of the recorded Groundwater Use Restriction, with the recording information stamped on it, within 15 days after the Register of Deeds returns the Groundwater Use Restriction to the responsible party. The Groundwater Use Restriction may be amended in the future with the approval of DNR if conditions change at the site and the residual contamination is remediated.

In addition, please note that if a potable well exists on this property, the well must be sampled, and the results must be sent to the Department of Natural Resources. Please verify in writing to me at the above address whether a potable well exists on this site within 15 days from the date of this letter.

Please note that this case closure is contingent upon proper documentation of proper abandonment of the monitoring wells on site. If monitoring wells remain at this site, please provide the documentation that this action has been completed, or have your consultant do so. The documentation can be sent to my attention at the above address.



Quality Natural Resources Management
Through Excellent Customer Service



If you have any additional information which was not formerly provided to the Department, and which you feel would significantly impact this closure decision, you may submit that information for our re-evaluation of case closure.

If you have any questions, please call me at 715-365-8990.

Sincerely,
NORTHERN REGION



Janet Kazda
Case Closeout Committee

→ cc: File
Lori Huntoon, Dept of Commerce
Steve Karklins, DG/2
Chuck Fitzgerald, Rhinelander
Bill Schultz, Rhinelander

Joe McGaver
Ayres Associates
PO Box 1590
Eau Claire, WI 54702-1590

296903

Document Number

GROUNDWATER USE RESTRICTION

12⁰⁰ pd

Declaration of Restrictions

In Re: [Section 3 Town 35 Range 1 ; 3 - 35 -1W; All that part of the SE-SW
& SW - SW, N of HWY 8 as now located & N of RR ROW]

STATE OF WISCONSIN)
) ss
COUNTY OF PRICE

WHEREAS, Loren De Garmo is the owner of the above-described property.

WHEREAS, one or more gasoline discharges have occurred at this property. Benzene contaminated groundwater above NR 140 enforcement standards exists on this property at the following location(s): Monitoring well MW-2 (abandoned 6/15/99) formerly located 103 feet south of the SE building corner of the existing building, benzene concentration of 6.6 ug/L; and at the location of monitoring well MW-8 (abandoned 9/22/97) formerly located 53 feet south of the middle of the south wall of the existing building, benzene concentration of 852 ug/L and 1,2 dibromoethane concentration of 13 ug/L; and all points between these former wells. Soil contamination exists at the following locations: the northeast bottom of the former tank bed excavation 40 feet south of the SE building corner of the existing building at a depth of 20 feet below ground surface to at least the water table (approximately 30 feet below ground surface). Soil contamination consists of gasoline range organics, 1,200 mg/Kg; benzene, 3.9 mg/Kg; toluene, 72 mg/Kg; ethylbenzene, 15 mg/Kg; and total xylenes, 87 mg/Kg. The approximate location of the soil and ground water contamination plume is shown on the attached Figure 1.

WHEREAS, it is the desire and intention of the property owner to impose on the property restrictions which will make it unnecessary to conduct additional soil or groundwater remediation activities on the property at the present time.

WHEREAS, natural attenuation has been approved by the Department of Natural Resources to remediate groundwater exceeding ch. NR 140 groundwater standards within the boundaries of this property.

WHEREAS, construction of wells where the water quality exceeds the drinking water standards in ch. NR 809 is restricted by ch. NR 811 and ch. NR 812. Special well construction standards or water treatment requirements, or both, or well construction prohibitions may apply.

NOW THEREFORE, the owner hereby declares that all of the property described above is held and shall be held, conveyed or encumbered, leased, rented, used, occupied and improved subject to the following limitation and restrictions:

Anyone who proposes to construct or reconstruct a well on this property is required to contact the Department of Natural Resources' Bureau of Drinking Water and Groundwater, or its successor agency, to determine what specific requirements are applicable, prior to constructing or reconstructing a well on this property. No well may be constructed or reconstructed on this property unless applicable requirements are met.

This restriction is hereby declared to be a covenant running with the land and shall be fully binding upon all persons acquiring the above-described property whether by descent, devise, purchase or otherwise. This restriction benefits and

REGISTER OF DEEDS OFFICE
PRICE COUNTY, WIS.
Received for Record

AUG 24 1999

10:30
AT 10:30 A.M. DULY RECORDED IN
VOLUME 425 OF RECORDS ON PAGE 569-
570
J. H. L. L. L.
REGISTER OF DEEDS

Recording Area

Name and Return Address

Loren DeGarmo
1060 Saunders Ave.
P.F.

3501033276

Parcel Identification Number (PIN)

is enforceable by, the Wisconsin Department of Natural Resources, its successors and assigns. The Department, its successors or assigns, may initiate proceedings at law or in equity against any person or persons who violate or are proposing to violate this covenant, to prevent the proposed violation or to recover damages for such violation.

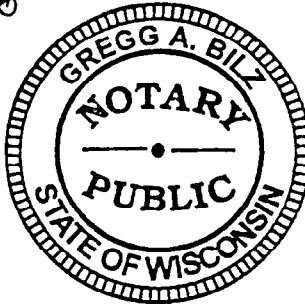
Any person who is or becomes owner of the property described above may request that the Wisconsin Department of Natural Resources or its successor issue a determination that the restrictions set forth in this covenant are no longer required. Upon receipt of such a request, the Wisconsin Department of Natural Resources shall determine whether or not the restrictions contained herein can be extinguished. If the Department determines that the restrictions can be extinguished, an affidavit, with a copy of the Department's written determination, may be recorded to give notice that this groundwater use restriction is no longer binding.

IN WITNESS WHEREOF, the owner of the property has executed this Declaration of Restrictions, this 24 day of August, 1999.

Signature: Loren L. DeGarmo
 Printed Name: Loren DeGarmo

Subscribed and sworn to before me
 this 24 day of August, 1999.

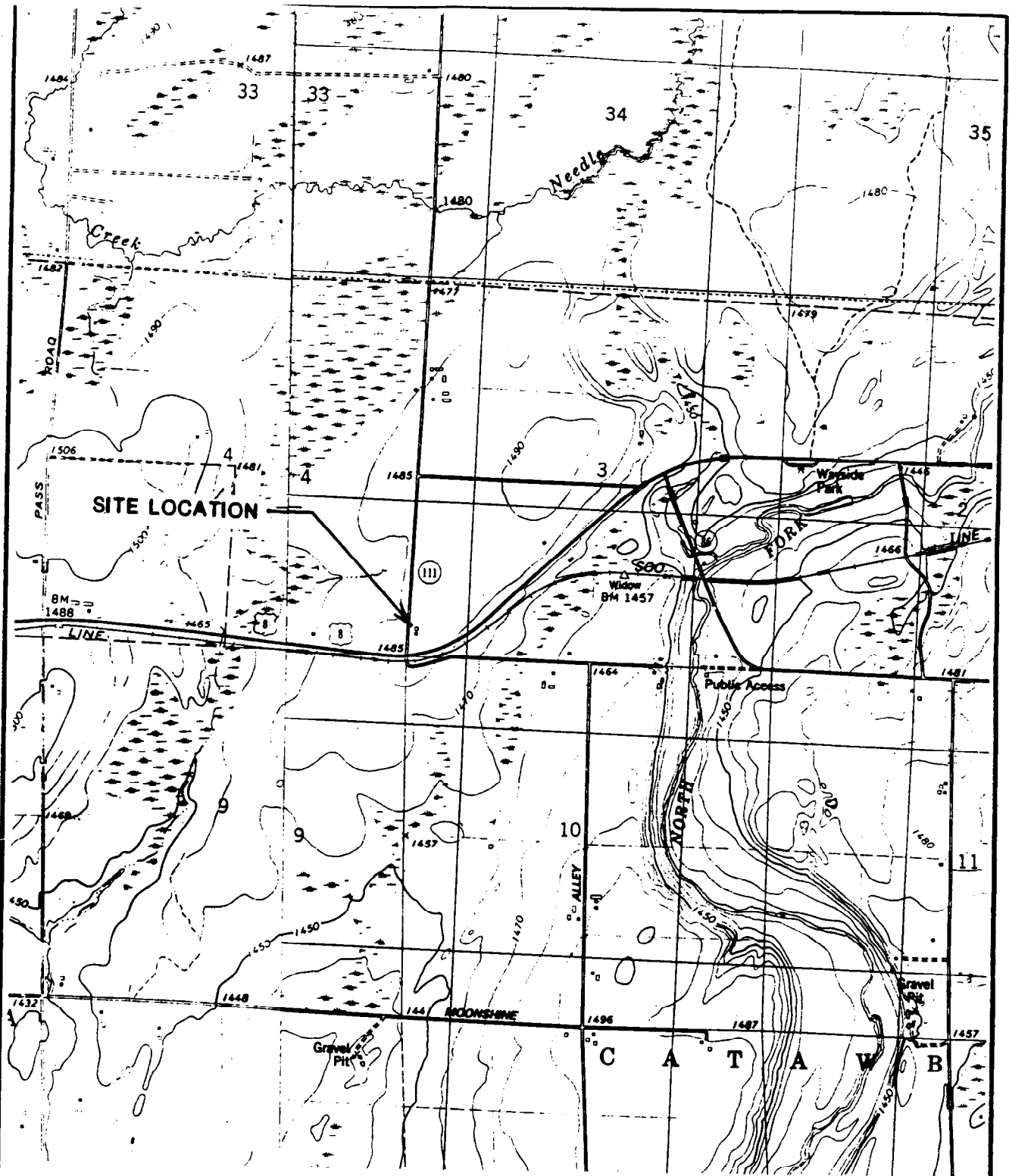
Gregg A. Bilz
 Notary Public, State of WI
 My Commission is permanent.



This document was drafted by the Wisconsin Department of Natural Resources.

[FILENAME :Z:\deeddocs\mgwrestr.dot]

2822LOCA.DGN



REMEDIAL INVESTIGATION
 LONGBRANCH TAVERN
 CATAWBA, WISCONSIN

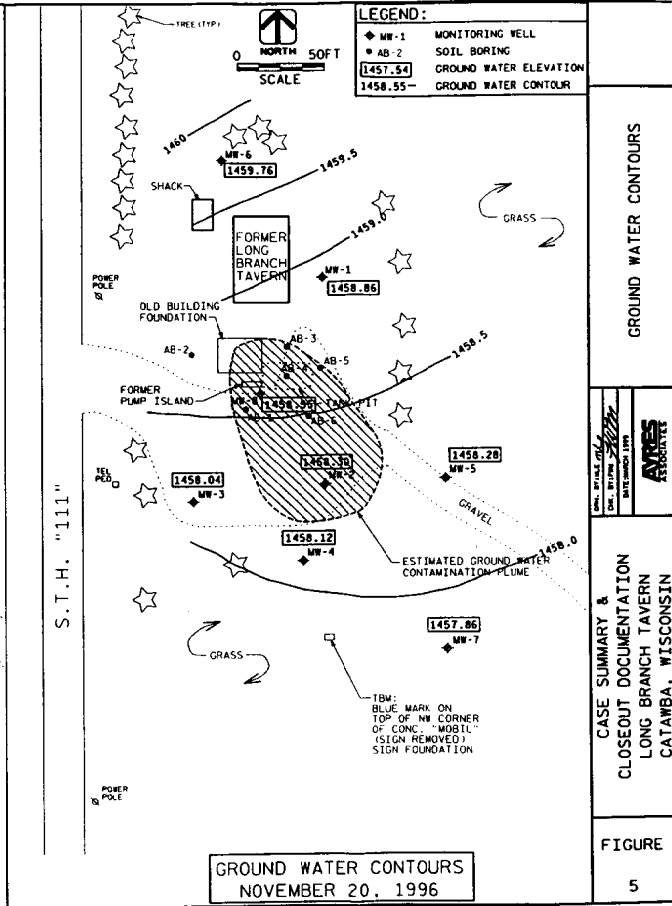
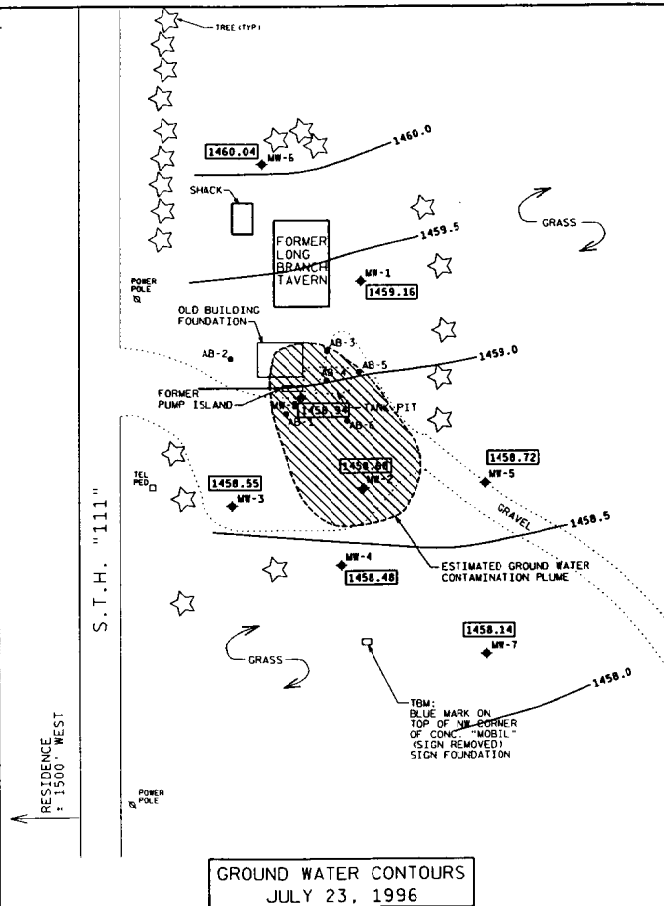
DRN. BY: MLE
 CHK. BY: FPM
 DATE: SEP 1991

AVES
 ASSOCIATES

LOCATION PLAN

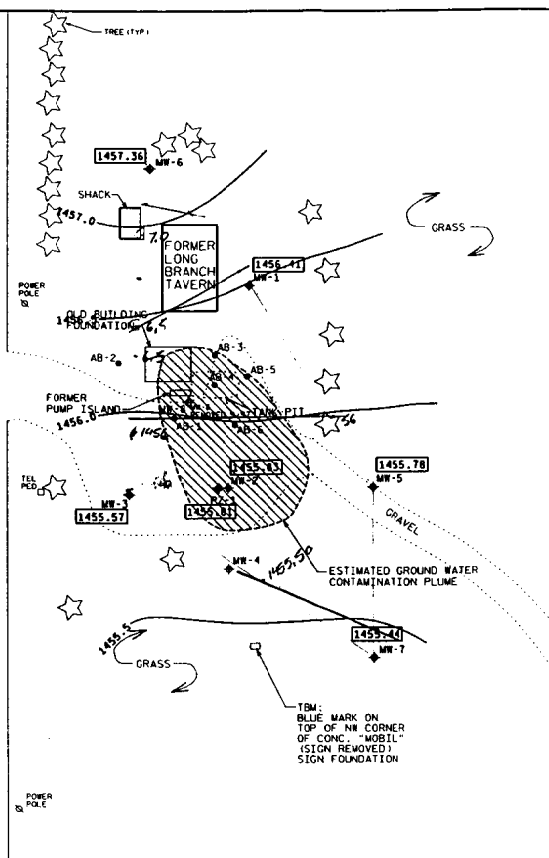
FIGURE

1



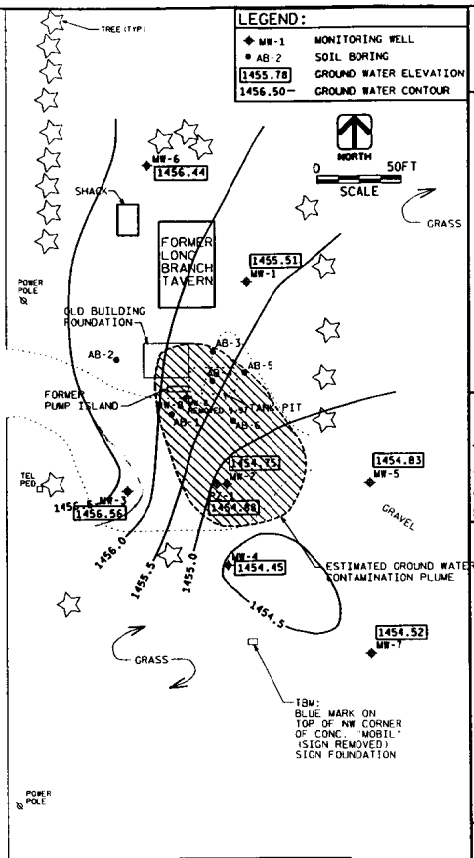
RESIDENCE
± 1500' WEST

S.T.H. "111"



RESIDENCE
± 1500' WEST

S.T.H. "111"



GROUND WATER CONTOURS

CASE SUMMARY &
CLOSEOUT DOCUMENTATION
LONG BRANCH TAVERN
CATAMBA, WISCONSIN

FIGURE

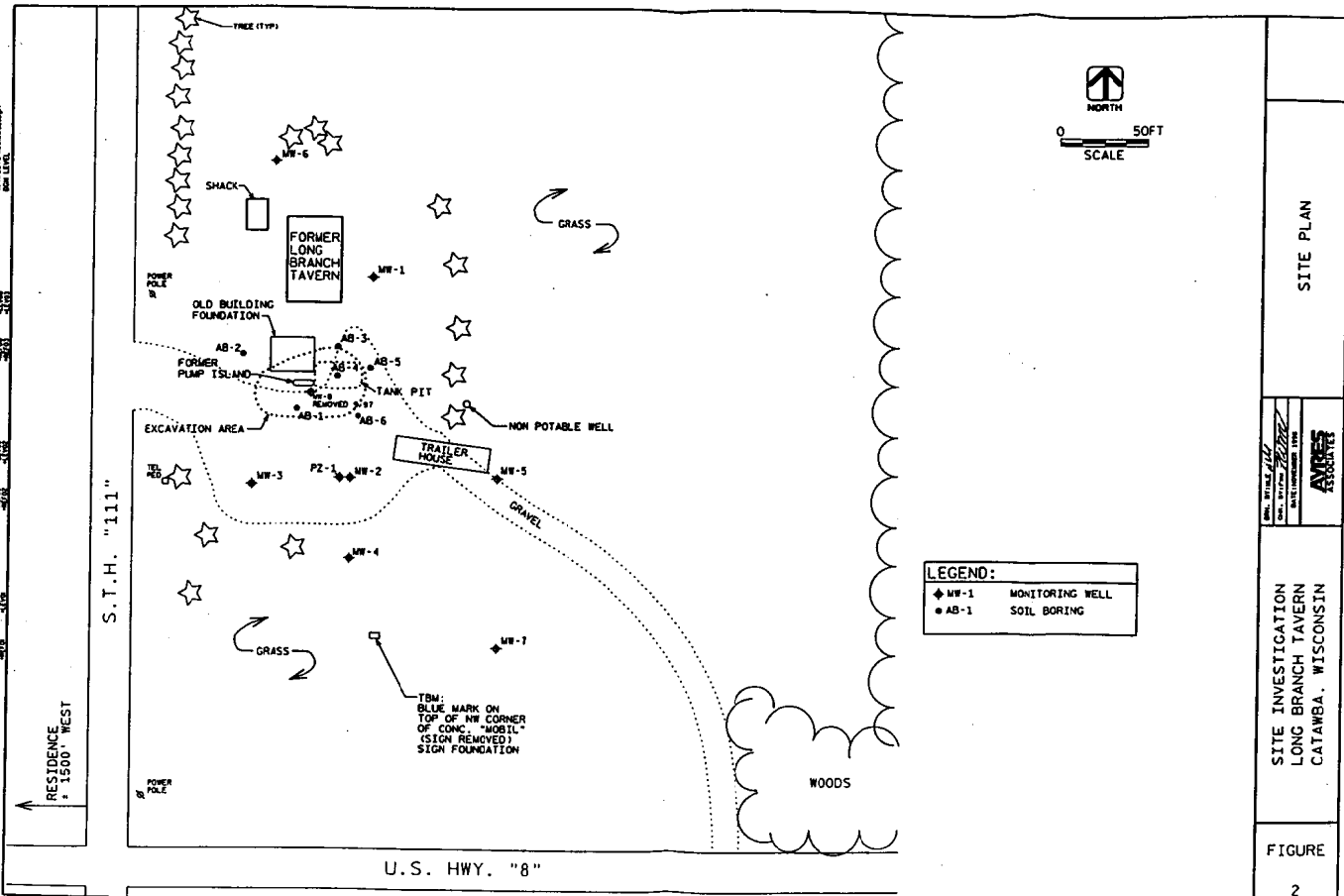
DATE: 10/11/94
BY: J. A. MOORE
JOB NO. 1000002.000

DATE: 10/11/94
BY: J. A. MOORE
JOB NO. 1000002.000

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BY: J. A. MOORE
JOB NO. 1000002.000

DATE: 10/11/94
BY: J. A. MOORE
JOB NO. 1000002.000

DATE: 10/11/94
BY: J. A. MOORE
JOB NO. 1000002.000



SITE PLAN

DATE: 10/11/94
BY: J. A. MOORE
JOB NO. 1000002.000
AMES ASSOCIATES

SITE INVESTIGATION
LONG BRANCH TAVERN
CATAWBA, WISCONSIN

FIGURE

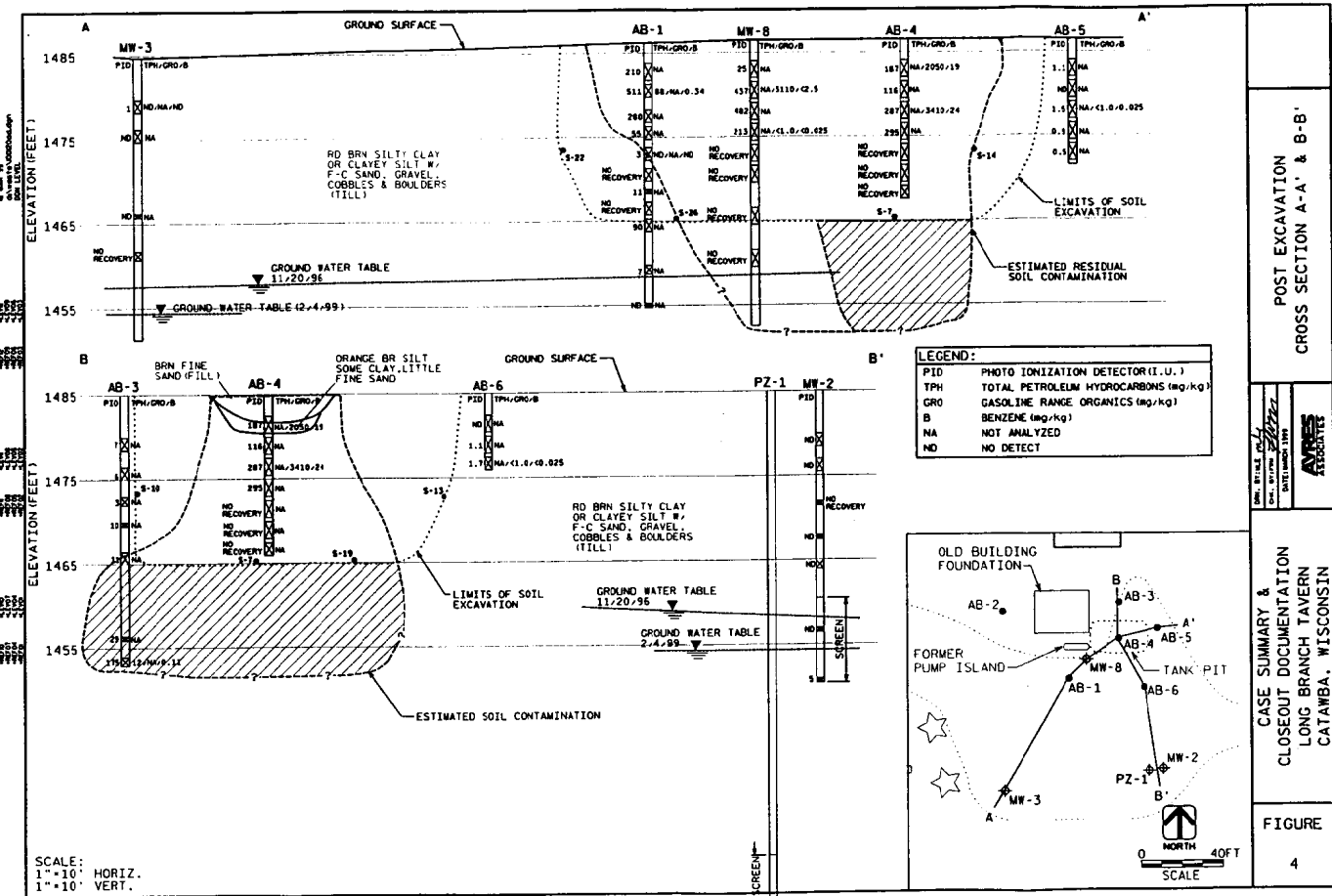


TABLE 4
GROUND WATER ANALYTICAL DATA--PETROLEUM PARAMETERS
LONG BRANCH TAVERN, CATAWBA, WISCONSIN

WELL ID	DATE	TPH (ug/L)	GRO (ug/L)	B (ug/L)	E (ug/L)	T (ug/L)	X (ug/L)	MTBE (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)	1,2-DCA (ug/L)	Lead (ug/L)	EDB (ug/L)
MW-1	9/19/91	<5	NA	<1	<1	<1	<2	NA	NA	NA	<1	6	NP
	10/2/91	58	NA	2	<1	2	3	NA	NA	NA	<1	2.2	NP
	11/17/93	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	<2	NA
	11/15/95	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.3	<0.2	NA	NA	NA
	7/23/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	11/20/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.8	<0.7	<0.4	<0.2	NA	<0.2
	12/2/97	NA	<30	<0.30	<0.2	<0.2	<0.8	<0.20	<0.6	<0.3	<0.2	<1.0	<0.4
	11/19/98	NA	<30	<0.30	<0.2	<0.2	<0.8	<0.20	<0.6	<0.3	<0.2	NA	<0.4
	2/4/99	NA	<30	<0.20	<0.30	<0.20	1.7*	<0.20	<0.30	<0.30	NA	NA	NA
MW-2	9/19/91	25000	NA	2400	710	2800	3460	NA	NA	NA	17	2	NP
	10/2/91	14000	NA	3000	620	3400	4210	NA	NA	NA	15	<2	NP
	11/17/93	NA	1400	260	7.2	6	15	<10	9.4	6.6	NA	NA	NA
	11/2/94	NA	180	6.2	1.4	1.8	4.6	<10	<1	2.8	NA	<2	NA
	11/15/95	NA	NA	3.6	<0.2	0.2	<0.6	<0.2	<0.3	<0.2	NA	NA	NA
	7/23/96	NA	NA	9.7	1.6	0.4	<0.6	<0.2	0.8	<0.4	1.2	NA	<0.2
	11/20/96	NA	NA	15	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	5.7	NA	<0.2
	12/2/97	NA	150	2.7	1.1	1.3	<0.8	<0.20	<0.6	0.9	1.1	<1.0	<0.4
	11/19/98	NA	110	13	1.3	<0.20	<0.80	<0.20	<0.60	<0.30	3.1	NA	<0.40
Duplicate	2/4/99	NA	<30	6.5	0.30*	0.60	<0.80	<0.20	<0.60	0.30*	1.6	NA	NA
	2/4/99	NA	67*	6.6	1.2	0.80	1.8*	<0.20	<0.30	0.70*	NA	NA	NA
MW-3	9/19/91	29	NA	<1	<1	1	<2	NA	NA	NA	<1	<2	NP
	10/2/91	270	NA	<1	<1	1	<2	NA	NA	NA	<1	3	NP
	11/17/93	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	NA	NA
	11/2/94	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	<2	NA
	11/15/95	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.3	<0.2	NA	NA	NA
	7/23/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	11/20/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	12/2/97	MW-3 was not sampled on 12/2/97 because we couldn't find the flush mount due to ice and gravel ground cover.											
	11/19/98	NA	<30	<0.30	<0.2	<0.2	<0.8	<0.20	<0.6	<0.3	<0.2	NA	<0.4
MW-4	2/4/99	NA	<30	<0.20	<0.30	<0.20	<0.90	<0.20	<0.30	<0.30	NA	NA	NA
	1/8/92	<30	NA	<1	<1	<1	<2	NA	<1	<1	<1	120	<2.0
	11/17/93	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	NA	NA
	11/2/94	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	<2	NA
	11/15/95	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.3	<0.2	NA	NA	NA
	7/23/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	11/20/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	12/2/97	MW-4 was not sampled on 12/2/97 due to an obstruction (frozen bentonite) at ~6.9 feet below top of casing.											
	11/19/98	MW-4 was not sampled on 11/19/98 because a dog was chained to the wells protective casing; Dog owner was not home to move the dog.											
ES	2/4/99	NA	<30	<0.20	<0.30	<0.20	1.7*	<0.20	<0.30	<0.30	NA	NA	
	-	NS	NS	5	1360	343	620	12	NS	NS	5	15	0.05
PAL	-	NS	NS	0.067	272	68.6	124	60	NS	NS	0.5	1.5	0.005

TABLE 4 (Cont.)
GROUND WATER ANALYTICAL DATA--PETROLEUM PARAMETERS
LONG BRANCH TAVERN, CATAWBA, WISCONSIN

WELL ID	DATE	TPH (ug/L)	GRO (ug/L)	B (ug/L)	E (ug/L)	T (ug/L)	X (ug/L)	MTBE (ug/L)	1,2,4-TMB (ug/L)	1,3,5-TMB (ug/L)	1,2-DCA (ug/L)	Lead (ug/L)	EDB (ug/L)
MW-5	1/8/92	<30	NA	<1	<1	<1	5	NA	<1	<1	<1	14	<1.0
	11/17/93	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	NA	NA
	11/2/94	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	<2	NA
	11/15/95	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.3	<0.2	NA	NA	NA
	7/23/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	11/20/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	12/2/97	NA	<30	<0.30	<0.20	<0.20	<0.80	<0.20	<0.60	<0.30	<0.20	<1.0	<0.40
	11/19/98	NA	<30	<0.30	<0.2	<0.2	<0.8	<0.20	<0.6	<0.3	<0.2	NA	<0.4
MW-6	2/4/99	NA	<30	<0.20	<0.30	<0.20	<0.90	<0.20	<0.30	<0.30	NA	NA	NA
	1/8/92	<30	NA	<1	<1	<1	<2	NA	<1	<1	<1	97	<1.0
	11/17/93	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	NA	NA
	11/2/94	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	<2	NA
	11/15/95	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.3	<0.2	NA	NA	NA
	7/23/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	11/20/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	12/2/97	NA	<30	<0.30	<0.20	<0.20	<0.8	<0.20	<0.60	<0.30	<0.2	<1.0	<0.40
MW-7	11/19/98	NA	<30	<0.30	<0.2	<0.2	<0.8	<0.20	<0.6	<0.3	<0.2	NA	<0.4
	2/4/99	NA	<30	<0.20	<0.30	<0.20	<0.90	<0.20	<0.30	<0.30	NA	NA	NA
	12/7/94	NA	<100	<1	<1	<1	<1	<10	<1	<1	NA	NA	NA
	11/15/95	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.3	<0.2	NA	NA	NA
	7/23/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	11/20/96	NA	NA	<0.2	<0.2	<0.2	<0.6	<0.2	<0.7	<0.4	<0.2	NA	<0.2
	12/2/97	NA	<30	<0.30	<0.20	<0.20	<0.8	<0.20	<0.60	<0.30	<0.20	<1.0	<0.40
	11/19/98	NA	<30	<0.30	<0.2	<0.2	<0.8	<0.20	<0.6	<0.3	<0.2	NA	<0.4
MW-8	2/4/99	NA	<30	<0.20	<0.30	<0.20	<0.90	<0.20	<0.30	<0.30	NA	NA	NA
	7/23/96	NA	<30	9.8	<0.2	<0.2	2.4	<0.2	<0.7	<0.4	<0.2	NA	2.8
	8/28/96	NA	58	30	<0.2	<0.2	7.8	<0.2	1.3	1	<0.2	NA	4
	11/20/96	NA	NA	852	<10	<10	78	<10	<20	<0.3	<0.2	NA	13
MW-8 was not sampled on 12/2/97 because it was removed on 9/22/97 during soil excavation activities.													
PZ-1	11/19/98	NA	<30	<0.30	<0.2	<0.2	<0.8	<0.20	<0.6	<0.3	<0.2	NA	<0.4
Duplicate	11/19/98	NA	<30	<0.30	<0.2	<0.2	<0.8	<0.20	<0.6	<0.3	<0.2	NA	<0.4
	2/4/99	NA	<30	<0.20	<0.30	<0.20	<0.90	<0.20	<0.30	<0.30	NA	NA	NA
Nonpotable Well	10/15/98	NA	<30	<0.30	<0.20	<0.20	<0.80	<0.20	<0.60	<0.30	<0.20	<1	<0.40
ES	-	NS	NS	5	1360	343	620	12	NS	NS	5	15	0.05
PAL	-	NS	NS	0.067	272	68.6	124	60	NS	NS	0.5	1.5	0.005

Abbreviations

* = Estimated concentration

ug/L = Micrograms per liter = parts per billion

NS = No standard established

TPH = Total petroleum hydrocarbons as gasoline

GRO = Gasoline range organics

B = Benzene

E = Ethylbenzene

T = Toluene

X = m-p- and o- xylene = Total xylenes

MTBE = Methyl tert-butyl ether

1,2,4-TMB = 1,2,4-trimethylbenzene

1,3,5-TMB = 1,3,5-trimethylbenzene

1,2-DCA = 1,2-dichloroethane

Lead = Dissolved lead

EDB = 1,2-Dibromoethane

ES = Wisconsin Administrative Code Chapter NR 140 "Water Quality" Enforcement Standard

PAL = Wisconsin Administrative Code Chapter NR 140 "Water Quality" Preventive Action Limit

Designations

< = Not detected at or above this concentration

 = Exceeds NR-140 Enforcement Standard (ES)

 = Exceeds NR-140 Preventive Action Limit (PAL)

TABLE 5
GROUND WATER ANALYTICAL DATA--BIOREMEDIATION PARAMETERS
LONG BRANCH TAVERN, CATAWBA, WISCONSIN

Well I.D.	Date	Temp. Deg. C	Dissolved O2 ppm	Redox Pot. eH as mV	pH	NO3+NO2 mg/L	Dissolved Iron mg/L	Dissolved Sulfate Filtered mg/L
MW-1	12/2/97	5.7	6.40	206.1	6.65	1.51		21.9
	11/19/98	8.0	7.20	219.8	6.92	1.93	<0.20	14.7
	2/4/99	8.0	6.4	272.6	7.12	1.94	<0.020	15.6
MW-2	12/2/97	6.1	2.50	249.3	5.94	0.43		22.2
	11/19/98	8.0	1.10	244.1	7.00	<0.14	0.027	17.5
	2/4/99	9.0	1.90	270.0	6.37	<0.14	0.065	20.3
MW-3	12/2/97	MW-3 was not sampled on 12/2/97 because we couldn't find the flush mount due to ice and gravel ground cover.						
	11/19/98	8.0	4.90	219.5	6.75	2.44	<0.020	17.0
	2/4/99	9.0	4.10	263.2	6.56	2.39	<0.020	15.7
MW-4	12/2/97	MW-4 was not sampled on 12/2/97 due to an obstruction (frozen bentonite) at ~6.9 feet below top of casing.						
	11/19/98	MW-4 was not sampled on 11/19/98 because a dog was chained to the wells protective casing; Dog owner was not home to move the dog.						
	2/4/99	8.0	6.40	286.0	6.30	3.79	<0.020	28.8
MW-5	12/2/97	5.5	3.35	246.6	5.73	0.52		29.2
	11/19/98	8.0	5.50	226.2	6.99	0.660	<0.020	23.1
	2/4/99	8.0	5.0	265.7	7.02	0.70	<0.020	26.4
MW-6	12/2/97	5.5	7.10	243.9	5.68	1.88		14.9
	11/19/98	8.0	7.20	189.0	5.80	2.24	<0.020	10.5
	2/4/99	8.0	8.0	238.4	7.26	2.22	<0.020	12.5
MW-7	12/2/97	5.5	1.90	222.7	6.46	<0.14		2.20
	11/19/98	8.0	1.0	240.7	7.39	<0.14	0.050	1.3
	2/4/99	8.0	2.1	278.8	7.28	<0.14	<0.020	3.02
MW-8	12/2/97	MW-8 was not sampled on 12/2/97 because it was removed on (9/22/97) during soil excavation activities.						
PZ-1	11/19/98	NA	NA	218.1	7.36	1.31	<0.020	14.5
	2/4/99	9.0	0.80	268.7	7.60	1.06	<0.020	23.5

Acronyms and Abbreviations

Temp. Deg. C = Temperature Degree Celsius

Dissolved O2 = Dissolved Oxygen

Redox Pot. = Redox Potential or eH measured in millivolts

mV = millivolts

NO3+NO2 = Nitrate + Nitrite Nitrogen

SO4 = Sulfate

mg/L = milligrams per liter ; equivalent to parts per million (ppm)